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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,374	07/22/2003	David C. Baese	N9554	7669

7590 06/29/2005

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EXAMINER

LU, JIPING

ART UNIT	PAPER NUMBER
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3749

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/624,374	BAESE ET AL.	
	Examiner	Art Unit	
	Jiping Lu	3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 31-33 is withdrawn in view of the newly discovered reference(s) to Kaneto et al. (JP 08261491 A), Miyake et al. (JP 06074559 A) and Suhr et al. (U. S. Pat. 5,293,841). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 112

2. Claims 27-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The newly added limitations of water supply conduit and water discharge conduit were not described in the originally filed specification.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed water supply conduit and water discharge conduit must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing

Art Unit: 3749

sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaneto et al. (JP 08261491 A).

Kaneto et al. shows a water heater apparatus comprising a burner 1, a primary heat exchanger 2 with water inlet 3 and water outlet 4, a water supply conduit (at 3), a water discharge conduit (at 4), a recirculation conduit 5, a recirculation valve 14, water temperature sensors 10, 11, 12 and a controller H which are arranged same as claimed.

Art Unit: 3749

6. Claims 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyake et al. (JP 06074559A).

Miyake et al. shows a water heater apparatus comprising a burner 21, a primary heat exchanger 20 with water inlet 10 and water outlet 30, a water supply conduit (at 10), a water discharge conduit (at 30), a recirculation conduit 40, a recirculation valve 42, water temperature sensors 11, 31, 51 and a controller 60 which are arranged same as claimed.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneto et al. (JP 08261491 A) or Miyake et al. (JP 06074559A).

The water heater of Kaneto et al. or Miyake et al. as above includes all that is recited in claims 29-30 except for the selected water temperature. It would have been an obvious matter of design choice to select the water temperature at any desired temperature in order to obtain the optimum result since applicant has not disclosed that the claimed temperature solves any stated problem in a new or unexpected way or is for any particular purpose which is unobvious to one of ordinary skill in the art and it appears that the claimed feature does not distinguish the invention over similar features in the prior art.

9. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneto et al. (JP 08261491 A) in view of McIlroy et al. (U. S. pat. 5,820,830)

Art Unit: 3749

Kaneto et al. shows a water heater apparatus comprising a burner 1, a primary heat exchanger 2 with water inlet 3 and water outlet 4, a water supply conduit (at 3), a water discharge conduit (at 4), a recirculation conduit 5, a recirculation valve 14, water temperature sensors 10, 11, 12 and a controller H which are arranged same as claimed. However, Kaneto et al. do not show a secondary condensing heat exchanger with corrosion coating and a combustion conduit for using the combustion products to preheat the incoming water. McIlroy et al. teach a water heater apparatus having a secondary condensing heat exchanger 84 with corrosion-resistant coating (see claim 2) and a combustion conduit 80 for supplying exhaust flue gas to the secondary condensing heat exchanger 84 in order to preheat the incoming water 106 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the water heater apparatus of Kaneto et al. to include a secondary condensing heater exchanger with corrosion-resistant coating and a combustion conduit as taught by McIlroy et al. in order to use exhaust flue gas to preheat the incoming water and therefore save the energy.

10. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyake et al. (JP 06074559A) in view of McIlroy et al. (U. S. pat. 5,820,830)

Miyake et al. shows a water heater apparatus comprising a burner 21, a primary heat exchanger 20 with water inlet 10 and water outlet 30, a water supply conduit (at 10), a water discharge conduit (at 30), a recirculation conduit 40, a recirculation valve 42, water temperature sensors 11, 31, 51 and a controller 60 which are arranged same as claimed. However, Miyake et al. do not show a secondary condensing heat exchanger with corrosion coating and a combustion conduit for using the combustion products to preheat the incoming water. McIlroy et al. teach a

Art Unit: 3749

water heater apparatus having a secondary condensing heat exchanger 84 with corrosion-resistant coating (see claim 2) and a combustion conduit 80 for supplying exhaust flue gas to the secondary condensing heat exchanger 84 in order to preheat the incoming water 106 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the water heater apparatus of Miyake et al. to include a secondary condensing heater exchanger with corrosion-resistant coating and a combustion conduit as taught by McIlroy et al. in order to use exhaust flue gas to preheat the incoming water and therefore save the energy.

11. Claims 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneto et al. (JP 08261491 A) in view of Suhr et al. (U. S. Pat. 5,293,841)

Kaneto et al. shows a water heater apparatus comprising a burner 1, a primary heat exchanger 2 with water inlet 3 and water outlet 4, a water supply conduit (at 3), a water discharge conduit (at 4), a recirculation conduit 5, a recirculation valve 14, water temperature sensors 10, 11, 12 and a controller H which are arranged same as claimed. However, Kaneto et al. do not show a secondary condensing heat exchanger with corrosion coating and a combustion conduit for using the combustion products to preheat the incoming water. Suhr et al. teach a water heater apparatus having a secondary condensing heat exchanger 14 and a combustion conduit 13 for supplying exhaust flue gas to the secondary condensing heat exchanger 14 in order to preheat the incoming water KSW same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the water heater apparatus of Kaneto et al. to include a secondary condensing heater exchanger and a

Art Unit: 3749

combustion conduit as taught by Suhr et al. in order to use exhaust flue gas to preheat the incoming water and therefore save the energy.

12. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyake et al. (JP 06074559A) in view of Suhr et al. (U. S. Pat. 5,293,841)

Miyake et al. shows a water heater apparatus comprising a burner 21, a primary heat exchanger 20 with water inlet 10 and water outlet 30, a water supply conduit (at 10), a water discharge conduit (at 30), a recirculation conduit 40, a recirculation valve 42, water temperature sensors 11, 31, 51 and a controller 60 which are arranged same as claimed. However, Miyake et al. do not show a secondary condensing heat exchanger with corrosion coating and a combustion conduit for using the combustion products to preheat the incoming water. Suhr et al. teach a water heater apparatus having a secondary condensing heat exchanger 14 and a combustion conduit 13 for supplying exhaust flue gas to the secondary condensing heat exchanger 14 in order to preheat the incoming water KSW same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the water heater apparatus of Miyake et al. to include a secondary condensing heater exchanger and a combustion conduit as taught by Suhr et al. in order to use exhaust flue gas to preheat the incoming water and therefore save the energy.

13. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneto et al. (JP 08261491 A) or Miyake et al. (JP 06074559A) in view of Suhr et al. (U. S. Pat. 5,293,841) as applied to claim 32 above, and further in view of McIlroy et al. (U. S. Pat. 5,820,830)

The water heater apparatus of Kaneto et al. or Miyake et al. as modified by Suhr et al. as above includes all that is recited in claim 33 except for the secondary condensing heat exchanger

Art Unit: 3749

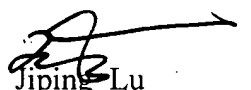
is coated with a corrosion resistant coating. McIlroy et al. teach a concept of providing coating on surfaces of the condensing heat exchanger for avoiding corrosion same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the water heater apparatus of Kaneto et al. or Miyake et al. to include a coating on the surfaces of the secondary condensing heat exchanger in order to avoid corrosion.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiping Lu whose telephone number is 571 272 4878. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 571 272-4877. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jiping Lu
Primary Examiner
Art Unit 3749

J. L.